15TH IMACS WORLD CONGRESS ON SCIENTIFIC COMPUTATION, MODELING AND APPLIED MATHEMATICS

Date: 26–30 August, 1997.

Location: Berlin, Germany.

Other information: CAM-Newsletter 12, nr. 2.

Contact address:
IMACS Congress Secretariat, GMD FIRST
Rudower Chaussee 5
D-12489 Berlin, Germany
Fax: 30-67045610
email: imacs97@first.gmd.de

FOURTH INTERNATIONAL CONFERENCE MOVING BOUNDARIES 97

Date: 27–29 August 1997.

Location: Ghent, Belgium.

Organizers:
R. Van Keer (Un. of Ghent, Belgium)
C.A. Brebbia (Wessex Inst. of Technology, UK).

Objectives: The classification 'free boundary problem' or 'moving boundary problem' can be applied to a wide variety of physical situations. The common feature is the presence, in their mathematical model, of an initially unknown (free) boundary or a boundary which moves throughout the analysis, the determination of which is an important part of the solution procedure. Practical examples are ingot solidification and scrap melting in metallurgy, free surface flows in hydraulics and fluid mechanics, the cooling and freezing of foodstuffs in the food industry, to name but a few. Although completely different in nature, these problems have several common features regarding their mathematical modelling and computational methods of solution. Rather than concentrate on the more mathematical aspects of the problem, the purpose of this conference is to promote the interaction between engineers, applied mathematicians and numerical analysts involved in the creation, development and application of computational methods to free and moving boundary problems. The chief objective is the establishment of a useful connection between scientists working in different areas of application but using similar numerical techniques.

Topics:
- Flow through Porous Media
- Wave Propagation in Solids and Liquids
- Seawater Intrusion
- Sedimentation and Infiltration
- Internal Waves
- Cavitational Flow
- Free Surface Flow
- Lubrication Problems
- Precipitation
- Solidification and Melting
- Oxygen Diffusion
- Metal Casting and Welding
- Electroplating and Electrodeposition
- Chemical Oxidation
- Electrochemical Machining
- Optimization
- Inverse Problems
- Fracture Propagation
- Contact Problems.

Other information: The conference follows the three successful previous meetings in this series, held in Southampton, UK, in 1991, Milan, Italy, in 1993 and Bled, Slovenia, in 1995.
The Proceedings of the conference will be published to a high standard in book form by Computational Mechanics Publications.

Conference language: English.

Contact address:
Sue Owen
Conf. Secr. MOVING BOUNDARIES
Wessex Inst. of Technology
Ashurst Lodge, Ashurst
Southampton, SO40 7AA, UK
Tel.: +44 (0) 1703 293223
Fax: +44 (0) 1703 292853
email: sue@wessex.witcmi.ac.uk

INTERNATIONAL CONFERENCE ON DETERMINISTIC AND STOCHASTIC MODELLING OF BIOINTERACTION

Date: 28–31 August 1997.

Location: Sofia, Bulgaria.

Other information: CAM-Newsletter 13, nr. 1.

Contact address:
Dr. Tanya Kostova, Inst. of Mathematics
Bulgarian Academy of Sciences
Acad. G. Bonchev str., block 8
1113 Sofia, Bulgaria
Fax: (+3592) 971 36 49
email: DESTOBIO@ISCBG.ACAD.BG
WWW: a http://www.math.acad.bg/special/destobio.html

NUMDIFF-8
NUMERICAL SOLUTION OF DIFFERENTIAL AND DIFFERENTIAL-ALGEBRAIC EQUATIONS

Date: 1–5 September, 1997.

Location: Un. of Halle, Germany.

Other information: CAM-Newsletter 12, nr. 2.

Contact address:
Ilona Tischler, Inst. fur Numerische Mathematik
Fachbereich Mathematik und Information
Martin-Luther-Un., Halle-Wittenberg
D-06099 Halle (Saale), Germany
email: numdiff@mail.mathematik.uni.halle.de

ALGORITMY'97
CONFERENCE ON SCIENTIFIC COMPUTING

Date: 2-5 September 1997.

Location: West Tatra Mountains, Slovakia.

Organizer: Slovak Technical University.

Topics:
- modeling of flows in porous medium
- simulations of free boundary phenomena
- computational fluid dynamics
- modeling of reaction-diffusion systems
- financial and economical modeling
- computational geometry
- image processing
- scientific visualization.

Invited speakers:
- P. Bastian (Stuttgart): "Efficient solution of multiphase flow problems in porous media".
- E. Baensch (Freiburg): "Adaptive finite element methods - concepts and applications".
- P. Frolkovic (Erlangen/Bratislava: "Upwinding techniques for convection dominated transport in porous media".
- D. Hilhorst (Paris): "Finite volumes and nonlinear diffusion equations".
- R.H.W. Hoppe (Augsburg): "Adaptive multilevel techniques for solving PDEs".
- R. Kornhuber (Stuttgart): "Monotone multigrid methods for solving free boundary problems".
- P. Knabner (Erlangen): "Adaptive finite volume discretization of density driven flows in porous media".
- S. Kroemker (Heidelberg): "Modeling of reaction - diffusion systems".
- G.H. Meyer (Atlanta): "Pricing american options".
- M. Rumpf (Bonn): "Visualization of large scale scientific data".
- M. Paolini (Udine): "Numerical methods for geometric evolution of interfaces".
- A. Schmidt (Freiburg): "Simulations of 3D crystal growth".
- J. Sethian (California-Berkeley): "Level set methods".
- M. Slodicka (Munich/Bratislava): "Finite elements in modeling of flow in porous media".
- M. Wierse (Stuttgart): "Numerical solution of 3D Navier-Stokes equations".

Other information: Special attention is given to robust numerical and statistical methods implemented on modern computer architectures. A special session devoted to education of modern mathematical methods is also intended. The programme of the conference include invited plenary talks, the communications of participants (15 minutes), poster sessions and software presentations. There will be refereed conference proceedings.

Contact address:
Prof. M. Komornikova
Dept of Maths and Descriptive Geometry
Slovak Technical University
Radlinskeho 11, 813 68 Bratislava, Slovakia
email: algorit@vox.svf.stuba.sk
WWW: http://www.kmadg.svf.stuba.sk/Alg.htm